

## REMARKS/ARGUMENTS

Claims 1, 3-11, and 13-20 are pending in the application and have been amended; reexamination and reconsideration are hereby requested.

Claims 1-20 were rejected as not enabled.

The claims have been amended to include the base model and remove ambiguities.

Claims 1-20 were rejected as indefinite due to terms such as  $A_{eff}$ ,  $A_o$ , ... .

The dependent claims have the  $A_{eff}$ ,  $A_o$ , ... as physical parameters, and the base model is a BSIM model.

Claims 1-20 were rejected as non-statutory.

The claims relate to models of a type as in BSIM, and thus have utility in simulation of integrated circuits.

Claims 1-5 and 11-15 were rejected as unpatentable over Liu or Cheng in view of Park or Barby.

Park uses a smoothing function ("saturation function") differing from the base model of the claims, and thus is not pertinent to making changes in the base model obvious. In particular, compare Park equation (9) with the required base model of the independent claims. Note that the senior authors of Park (Ko and Hu) are also the senior authors of Liu and Cheng; Park appears to be the 1991 version and Liu and Cheng are the 1999 version. Similarly, Barby discusses polynomial splines but not any function analogous to the base model required by the independent claims. Lastly, the fact that  $A_o/K$  could equal  $\delta$  for a certain value of  $A_o$  does not make claims 4 and 14 the same as Liu and Cheng; rather,  $K$  defines the model analogous to  $\delta$ , and  $A_o$  varies with the particular transistors being modeled.

The Examiner inquired as to the source of equation (1) on application page 2. This is equation (3.6.4) of the popular cited Liu reference; and which also appeared in the earlier 1995 version BSIM3v3 (see attached Exhibit).

The appendix contains proposed drawing changes to Figs. 1-3 adding the labeling "prior art".

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The amendments to the specification correct the errors pointed out by the Examiner and also insert the missing term in equation (10) on page 11.

Respectfully submitted,



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